EUROPEAN EDUCATIONAL RESEARCH Quality Indicators
EERQI
SEVENTH FRAMEWORK PROGRAMME
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EERQI Innovative Indicators and Test Results

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Overview

- **Methodology**
- **Indicators and Data Sources**
- **Tools: aMeasure**
- **Results: Presence Peer Review Items in our Data Sources**

0. At the Outset ...

- **~42.000 documents in the EERQI content base**
  - ~36.000 OA documents and ~6.000 documents from the publishing partners
- **Distinguish “intrinsic” and “extrinsic” indicators**
- **First approach presented in September 2008 (Gothenburg)**
  - Comparision of results from human peer reviewing and results obtained from automatic semantic text analysis => not viable
- **Second approach suggested in October 2008**
  - Comparision of peer review assessments obtained by the publishers and results obtained from statistical / bibliometrical analysis => not viable
- **Third approach (“Correlation Methodology”) presented and discussed in September 2009 in Vienna => retained for implementation**

EUROPEAN EDUCATIONAL RESEARCH
Quality Indicators

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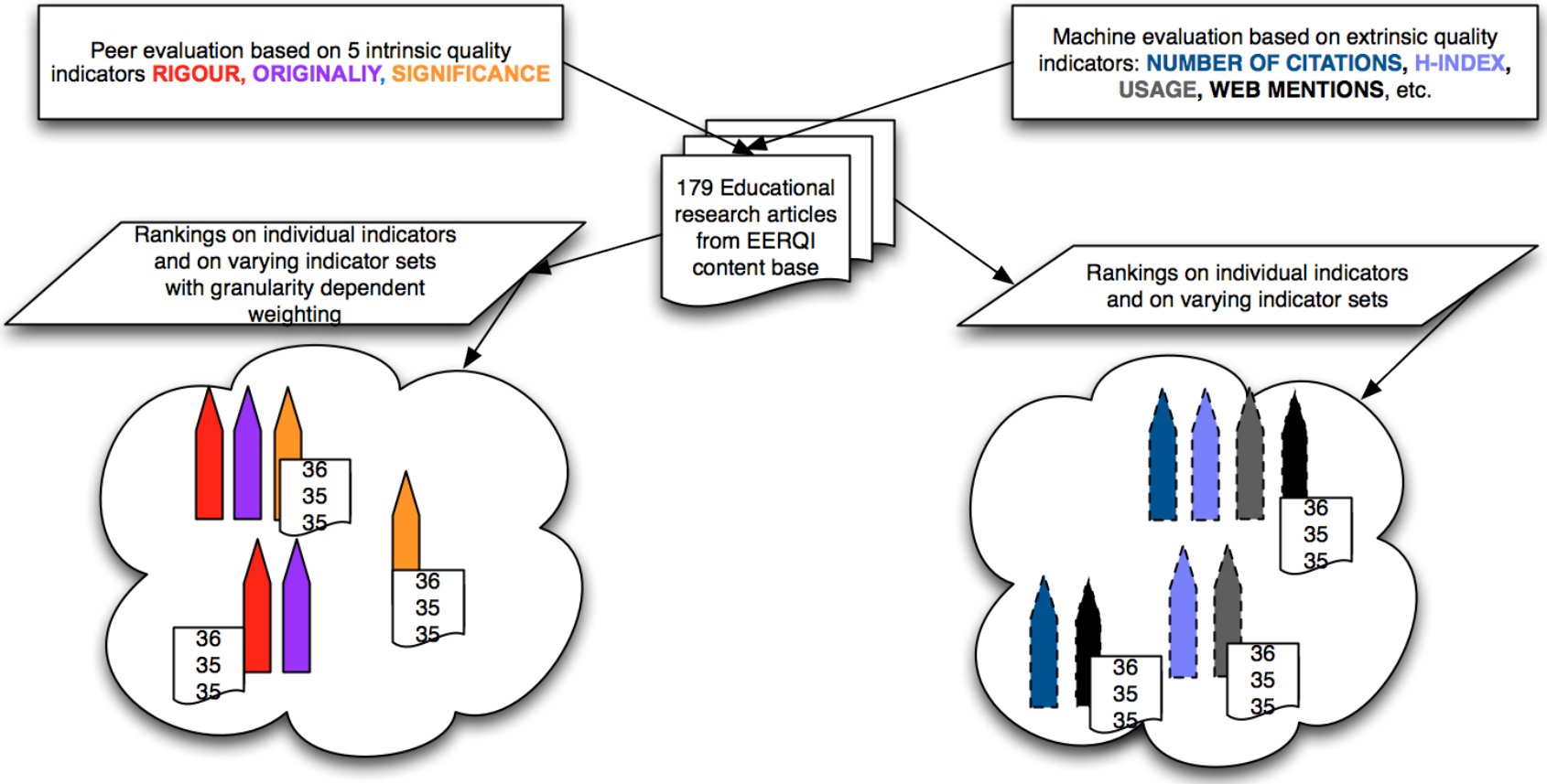
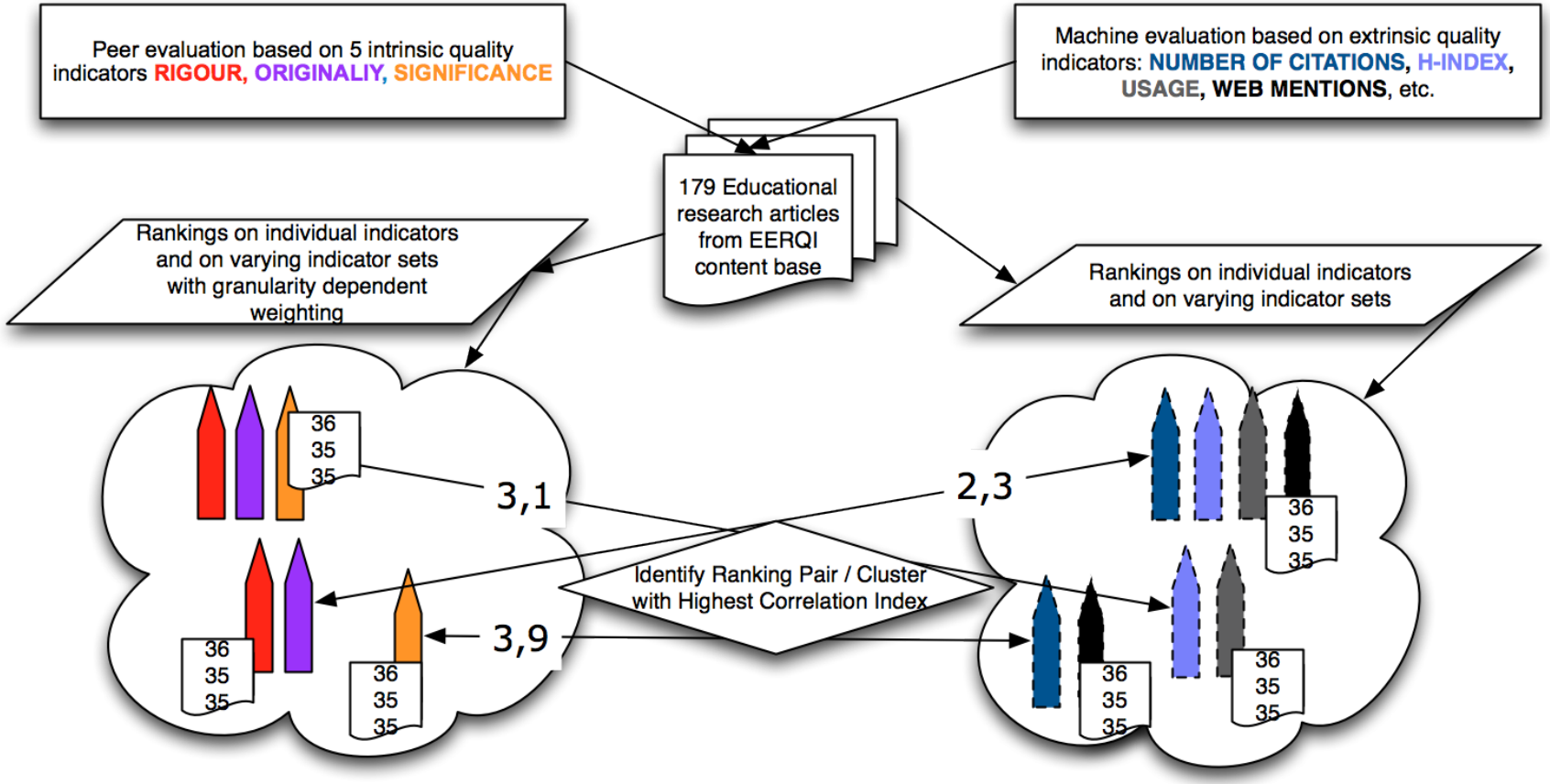
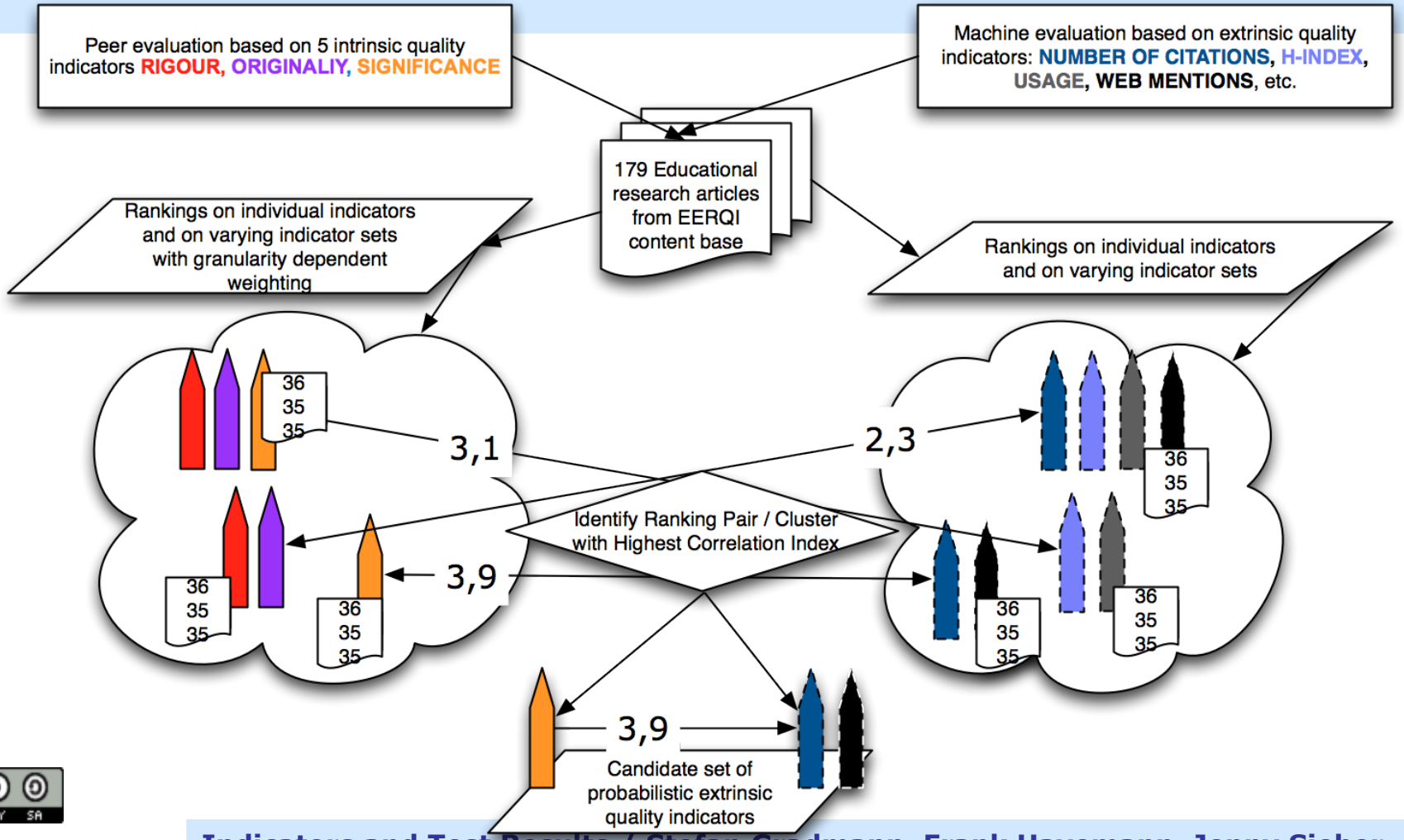
Correlation Methodology (1)



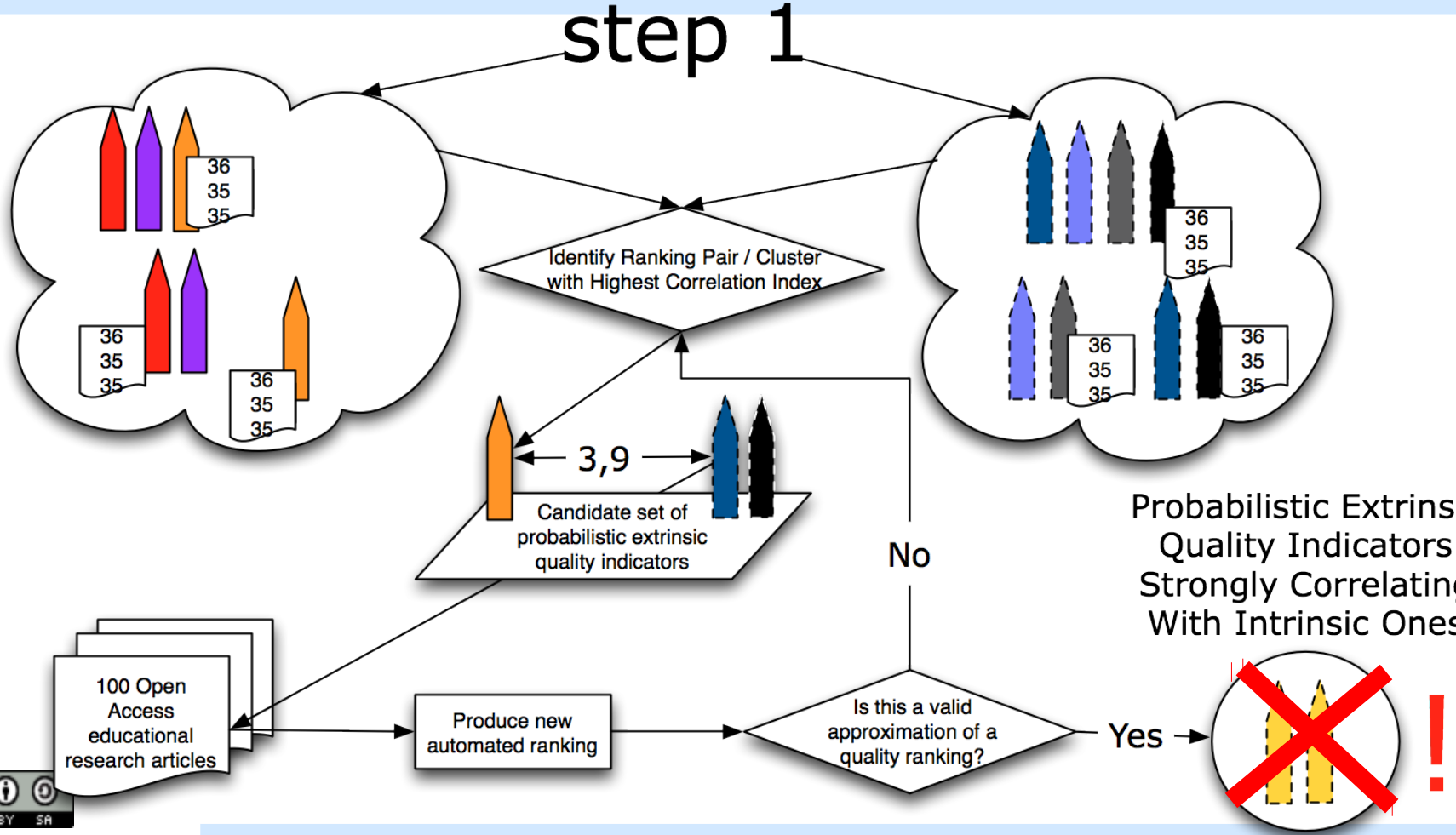
Correlation Methodology (2)



Correlation Methodology (3)



Correlation Methodology (4)



2. Extrinsic Indicators and Data Sources

- **Citation based measures** like**:**
  - The Scimago Journal Rank
  - The Source Normalized Impact per Paper per author
  - The h-index
  - The g-index
  - The e-index
  - Retrieved in SSCI, Scopus, Google Scholar
- **Usage indicators**: based on data provided by the project MESUR
  - Double assumption: The more a research paper is cited, the higher the impact. The more a document is used, the higher the impact.
  - In addition the publishing partners have been asked to provide the project with usage data like number of downloads granulated on a daily basis and distribution of downloads granulated on top-level-domains

2. Extrinsic Indicators and Data Sources

- **Web impact via mentions**: idea proposed by Mike Thellwall, 2009, Introduction to Webometrics: Quantitative Web Research for Social Sciences.
  - Using LexiURL Searcher to create web impact reports
  - Web impact reports are collections of statistics about web pages that mention a given word or phrase (in our case these are author name and title of article).
- **Social network services**:
  - mentioning of articles, authors or journals in these services
  - might be a hint of their impact
  - Sources: Connotea, LibraryThing, CiteULike, Mendeley
  - Analysed using aMeasure

2. Extrinsic Indicators and Data Sources

- Web Impact and Social Network based indicators are innovative.
- The latter is original in the sense of being our own creation.
- Once the relevant information are gathered from the different sources the the idea is to rank them using several different combinations and weightings.
- The aim is to identify the ranking obtained from extrinsic characteristics that matches best a ranking based on human peer review.
- More on this tomorrow ...

3. A Tool: aMeasure

- Data retrieval tool for retrieving and analysing e.g. Google Scholar content
- Stack of tools to query Google Scholar and various web search engines and Web2.0 applications such as Google Websearch, Metager, CiteULike, LibraryThing, Mendeley and Connotea
- Written in Java
- Uses APIs and screen scraping
- Validated: produces the same results as browser extension „Scholarometer“
- Created by Daniel Stoye

4. First Results

- intrinsic data of 179 rated papers
- two files of extrinsic data:
  - citation numbers of rated papers obtained with Google Scholar (on March 8, 2011)
  - data from search engines and social-network services.
- extrinsic author data suffer from homonymic authors → we only use paper attributes.
- Papers in English and in German distributed over three thematic groups:
  - Group 1 includes papers about "assessment, evaluation, testing & measurement" (35 / 35)
  - group 2 about "comparative and inter-/multicultural education" (33 / 17)
  - group 3 about "history and philosophy of education" (34 / 17)

4. First Results: Traditional Sources

- 17 German and English journals selected from project management for the 3 groups of peer review phase 3
- Only 4 educational research journals are indexed in ISI databases.
  - Not one of the 4 journals listed is indexed with an article published in 2006.
- Coverage in Scopus is more promising.
  - 7 out of 17 journals are indexed.
- Concerning other sources it turned out that the databases ERIC (9 out of 17), Searches in Academic Search Premier, Sociological Abstracts, and Educational Research Abstracts each 6 hits out of 17 hits are offering a relative complete coverage of educational research journals – but no citation or usage figures.
  - The presence in one of these could however be considered an indicator due to their selective reviewing policy

4. First Results: Usage

- MESUR (Metrics from Scholarly Usage of Resources)
  - Principal investigator: Johan Bollen
  - Institution: Los Alamos National Laboratory
  - 15 of 20 journals from the first EERQI sample are directly or indirectly part of the Mesur database
  - Further tests in the Mesur database have been attempted – but with no reply from Johan …
- Usage data provided by publishers arrived too late for systematic analysis and the coverage is very selective, anyway.

4. First Results: Google Scholar

- Most exhaustive and complete source for extrinsic indicators
- Accessible via aMeasure
- Indicators that can be derived from Google Scholar data:
  - Number of papers,
  - Papers per author,
  - Cites per paper,
  - Cites per year,
  - H-index, G-index, E-index etc.
- BUT: Persisting problem of homonym authors prevent a more systematic use of GS (as of any other author name based processing …)
- Web Mentions and Social Networks will be reported on in tomorrow's presentation.

Thank you for your patience and attention.